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ABSTRACT

Results of studies concerning socioeconomic inequality characteristic of student populations in most university systems and equality of opportunity at the point of university entrance are considered in relation to the accessibility of Ontario universities to students from low-income families. Important considerations in the design of such studies are also addressed. It is claimed that studies of educational expectations and student characteristics in Ontario and elsewhere show that young people who attend postsecondary institutions, particularly universities, are disproportionately drawn from the urban, middle to upper class, educationally sophisticated, and relatively prosperous sectors of society. Whether the background factors affecting academic success, motivation, and career expectations are primarily sociocultural or economic is a matter of debate. Gender and background variables represented by socioeconomic status and regional strata categories are correlated with levels of postsecondary educational achievement. Gender and urban-rural origins are also related to the level of postsecondary education. It is suggested that there is a shortage of reliable data on the number of people who are prevented from attending a university simply because they cannot afford it. There is uncertainty about the effect of different forms of financial aid and the effect of tuition costs on attendence. (SW)

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EQUALITY OF ACCESS TO ONTARIO UNIVERSITIES

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NATIONAL INSTITUTE OF EDUCATION

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The general prospect of tuition increases repeatedly leads to concern about the accessibility of Ontario universities to students from low-income families. This paper examines briefly the socio-economic inequality characteristic of student populations in most university systems, and then considers in more detail equality of opportunity at the point of university entrance, where institutional and government policies can realistically be expected to improve access.

If accessibility is defined as equal participation rates for all groups in society, the universities in Ontario and those in virtually every other jurisdiction fail to meet the ideal of enrolling students who are completely representative of the larger population in terms of socio-economic status, regional origins, ethnic background, and gender. Studies of educational expectations and student characteristics in Ontario[1] and elsewhere show that young people who attend post-secondary institutions, particularly universities, are disproportionately drawn from the urban, middle to upper class, educationally sophisticated and relatively prosperous sectors of society.

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[1]The most useful Canadian studies are Robert M. Pike, Who Dòesn't Get to University - and Why: A Study on Accessibility to Higher Education in Canada (Ottawa: 1973); Marion R. Porter, John Porter and Bernard R. Blishen, Does Money Matter?: Prospects for Higher Education (Toronto: 1973); Hugh A. McRoberts, Follow-up of Grade 12 Students From the Blishen-Porter Study of Educational Aspirations (Ottawa: 1973); and Paul Anisef, J. Gottfried Paasche, and Anton H. Turrittin, Is the Die Cast? Educational and Work Destinations of Ontario Youth: A Six-Year Follow-up of the "Critical Juncture" High School Students (Toronto: 1980).

Subsidized tuition and student aid have certainly benefited individuals who are academically qualified but poor; and remedial programmes have helped others whose earlier education was deficient. However, as Robert Pike and others have shown, measures to increase accessibility at the point of university entrance have not substantially altered the socio-economic mix of the student population, since the most significant selection factors operate at a much earlier stage. It is generally accepted that, regardless of innate capacity for learning, a child's early environment affects motivation, verbal and social skills, and other abilities that contribute to success in school. Primary and secondary schools are often not able to counteract background influences that limit motivation or capacity for learning even before entrance to kindergarten. Although many poor families do encourage their children, and determined individuals may succeed in spite of various childhood disadvantages, for the majority, university access in Ontario depends on entrance into and completion of a five-year academic programme in high school. If students are not encouraged to think of university as a realistic possibility during the later years of primary school, they may not choose high school courses that lead to university entrance, or they may not maintain the required standing. Table 1 (based on a survey of students in Grade 12 in 1973) shows the correlation of high school programme with gender, socio-economic status (SES), and urban-rural origins (strata). Table 2 presents outcomes of high school programme in terms of grades and further educational achievement. Statistically, the student most likely to enter the academic programme, complete Grade 13 and graduate from university comes from an urban family of high socio-economic status (as measured by a combination of

Table 1

TYPE OF HIGH SCHOOL PROGRAM BY SELECTED SOCIAL BACKGROUND FACTORS

	Social Background Factors									
	Sex		SES				Stratum			
	M (%)	F (%)	Low (%)	2 (%)	3 (%)	High (%)	Urban (%)	2 (%)	3 (%)	Rural (%)
Academic	63.4	74.4	49.7	62.6	74.1	90.6	84.1	72.2	70.8	55.5
Commercial	5.9	24.2	27.1	17.7	13.0	3.9	10.8	14.4	13.7	20.8
Technical/ Vocational	30.7	1.3	23.2	19.8	12.9	5.4	5.2	13.4	15.5	23.7
TOTAL (N)	720	786	374	347	330	383	338	330	354	485
Significance (p)										

From: Anisef et al, Is the Die Cast? (1980), p. 72, Table 3-1.

Table 2

EDUCATIONAL OUTCOMES BY TYPE OF HIGH SCHOOL PROGRAM

Educational Outcomes	Type of Program in High School		
	Academic (%)	Commercial (%)	Technical/Vocational (%)
Grades			
(70%) of higher	52.1	33.8	23.3
Lower than 70%	47.9	66.2	76.7
TOTAL (N)	1020	229	227
Significance (p)			
Educational Achievement In 1979			
University graduate	41.3	4.1	7.4
CAAT graduate	19.2	15.8	21.3
Some university/some CAAT	16.2	8.7	14.1
No post-secondary	23.3	71.4	57.1
TOTAL (N)	1042	233	231
Significance (p)			

From: Is the Die Cast?, p. 73, Table 3-2.

family income, and parental occupations and educational attainment). Data in Table 3 (from a 1971 survey of student aspirations) show a similar relationship between socio-economic status and plans for further education or work. It must be remembered that this table records the responses of Grade 12 students - those who dropped out at earlier stages would be even less likely to continue their education. Table 4 shows the range of educational attainment of people who were in Grade 12 six years earlier. Again, the higher SES, urban members of the cohort had highest rates of university graduation.

Gender and background variables represented by the SES and regional strata categories are also correlated with levels of post-secondary educational achievement. Graduates from CAAT's are generally representative of all SES groups. However, nearly 60% of those enrolled in graduate or professional schools are from high SES families. Education of parents is usually reported more accurately in surveys than family income, and is a highly stable indicator of socio-economic status.[2] Data from a Statistics Canada survey of post-secondary students (Table 5) illustrate the relationship of father's education to enrolment in different post-secondary programmes. Fathers of graduate students have highest levels of educational attainment, and fathers of students in terminal community college courses have the lowest. These correlations suggest differing aspirations and the continuing influence of early academic

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[2] See Lorna Marsden and Edward B. Harvey, "Equality of Educational Access Reconsidered: The Postsecondary Case in Ontario", Interchange, v. 2, no. 4 (1971), 11-26.

Table 3

EDUCATIONAL ASPIRATIONS AFTER HIGH SCHOOL BY SOCIO-ECONOMIC STATUS (GRADE 12)

	SOCIO-ECONOMIC STATUS						
ASPIRATIONS	I (High)	II	III	IV	V	VI (Low)	TOTAL
Go to work	11	11	15	13	24	26	19
Apprenticeship or private training school	1	4	6	7	11	13	9
Teachers' college or nursing	5	5	5	7	8	8	7
Community college	10	9	12	16	16	14	14
University but not graduate	2	1	2	1	1	1	1
Graduate from university	51	42	35	36	22	24	31
Post-graduate work	10	12	9	6	5	3	6
Other plans (not specified)	3	4	6	6	5	4	5
Does not know	7	12	10	8	8	7	8
	100	100	100	100	100	100	100
N =	180	218	300	555	1042	300	2595

Source: Student Questionnaire 12b.

From: Porter, Porter and Blishen, Does Money Matter? (1973), p. 48, Table 2-3.

Table 4

RECRUITMENT INTO POST-SECONDARY EDUCATIONAL ATTAINMENTS FROM GENDER BACKGROUND, SOCIOECONOMIC ORIGINS, AND STRATA

Educational Achievement in 1979	Sex			SES					Stratum				
	Men (%)	Women (%)	Total (N)	Low (%)	2 (%)	3 (%)	High (%)	Total (N)	Urban (%)	2 (%)	3 (%)	Rural (%)	Total (N)
Presently enrolled graduate or professional school	54.0	46.0	98	14.7	9.0	17.4	58.9	96	24.7	28.8	30.4	16.7	98
Graduated university	50.1	49.9	310	14.3	19.8	19.3	46.6	305	30.8	23.8	24.5	20.9	310
Attended university but did not graduate	59.2	40.8	91	18.9	16.7	26.2	38.2	83	34.5	20.8	27.7	17.0	91
Graduated from CAAT	36.2	63.8	251	27.5	30.2	21.6	20.7	234	16.4	19.0	24.1	40.4	251
Attended CAAT but did not graduate	55.3	44.7	91	30.0	22.3	27.6	20.1	87	22.2	20.3	22.6	34.9	91
University graduate and some CAAT experience	57.0	43.0	21	6.1	21.1	26.1	46.7	19	33.2	19.7	36.9	10.2	21
University graduate and graduated from CAAT	22.2	77.8	30	15.2	26.8	25.5	32.5	26	32.6	15.9	30.1	21.4	30
Graduated from CAAT and some university experience	44.3	55.7	38	22.5	17.1	43.6	16.8	38	26.1	36.0	9.2	28.8	38
Some university and some CAAT experience	49.2	50.8	41	17.2	18.3	17.0	47.5	39	27.9	28.3	25.4	18.4	41
No post-secondary	48.6	51.4	550	37.5	29.1	24.0	9.4	524	16.3	20.1	21.2	42.3	550

From: Is the Die Cast?, p. 133, Table 4-3.

Table 5

Educational Attainment of Fathers of Full-time Post-Secondary Students, 1974-75

Fathers' Educational Attainment	Full-time Students					
	Transfer	Terminal	Undergraduate	Professional	Graduate	Total
Elementary	23.9	31.9	19.8	21.9	15.9	23.4
Some High School	21.7	29.0	23.8	20.9	19.4	24.4
Completed High School	14.9	14.4	15.1	14.6	14.3	14.8
Sub-total Secondary	36.6	43.5	38.9	35.5	33.7	39.3
Total Elementary and Secondary	60.5	75.4	58.7	57.3	49.6	62.6
Post-secondary Non-university	15.3	13.0	12.5	11.2	11.2	13.0
Some University	7.0	3.9	7.1	7.2	8.3	6.3
University Degree(s)	17.2	7.6	21.7	24.2	30.9	18.0
Sub-total University	24.2	11.5	28.8	31.5	39.2	24.4
Total Post-secondary	39.5	24.6	41.3	42.7	50.4	37.3
Grand Total	100.0	100.0	100.0	100.0	100.0	100.0
Number Reported	59,437	93,195	189,275	23,401	14,132	379,440

From: von Zur-Muehlen, The Educational Background of Parents of Post-Secondary Students in Canada (1978), p. 24.

achievement, as well as direct or indirect financial barriers at the highest levels of post-secondary education.

Gender and urban-rural origins are also related to the level of post-secondary education. Although the university graduates in Table 4 are equally representative of the sexes, men are more likely than women to be enrolled in graduate or professional school. Perhaps because of programme choice, more women than men graduate from CAAT's. CAAT's, having lower costs and wider geographic distribution, also enroll and graduate more students from rural areas than from large cities. As Table 2 shows, the choice of high school programme largely determines type of post-secondary institution - vocational/technical and commercial programmes' students are more likely to attend a CAAT than a university, if they continue their education at all.

Whether the background factors affecting academic success, motivation and career expectations are primarily socio-cultural or economic is a matter of debate. In a study of the aspirations and educational plans of Ontario grade 8, 10 and 12 students surveyed in 1971, Porter, Porter and Blishen concluded that financial barriers, rather than different cultural values, were largely responsible for the lower rate of university attendance of working class youngsters. Some financial barriers act at the point of university entrance (cost of tuition, living expenses, books, foregone income); while others are indirect, limiting expectations at earlier stages. For example, poor families may not be able to provide space and facilities for study at home, or a child

may grow up feeling the family cannot afford higher education and will adjust aspirations and academic achievement accordingly.

It is difficult to separate these early financial barriers from socio-cultural factors, such as the lack of educated role models in the immediate environment, or different educational and career expectations for male and female offspring. Whatever the ultimate causes, universities can do little in the short term to reduce inequalities resulting from early background influences that determine entrance to the academic stream long before high school graduation. However, the universities may be able to increase opportunities for students who have shown some academic potential in secondary school, but who are being discouraged from attending university because of financial difficulty or lack of accurate information about possibilities for and benefits of higher education.

Accessibility may also be defined in a more limited sense as equal opportunity for higher education once the required high school education has been attained. Existing barriers to accessibility at the point of university admission may involve:

(1) finances - simply the lack of money to cover direct costs, or the need of immediate income after high school;

(2) geography - people living close to higher education institutions are more likely to attend than those living in remote areas;

(3) or communication - inaccurate information about the costs and benefits of higher education, the availability of student aid, or requirements of different programmes.

There is a shortage of reliable data on the numbers of people who are prevented from attending university simply because they cannot afford it. According to a survey of high school guidance counsellors in the United States, an additional 21.7% (approximately 200,000) high school graduates in 1977 would be best served if they continued their formal education but would fail to do so solely because they lacked the funds.[3] Since the higher education participation rate in Canada is lower than that in the U.S., the percentage in Canada might be even higher. The author of a recent U.S. article holds a different point of view, asserting that in proportion to family income, university education has never been cheaper.[4] However, American families have become accustomed to generous financial aid, and are increasingly reluctant to make sacrifices for their children's education. An apparent decline in the economic value of the B.A. contributes to this attitude.

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[3]Humphrey Doermann, Toward Equal Access, (New York, 1978), p. 26.

[4]Alston Chase, "Financing a College Education", Atlantic Monthly, (April 1980), 92-98.

Hugh McRoberts, in his follow-up study to the Blishen-Porter survey of student aspirations, found that 59.7% of respondents who did not attend college or university gave financial reasons for their decisions.[5] However, one of the responses included in the financial category was "I want to get a job and start earning money as soon as possible", a statement that does not necessarily mean a shortage of money for further education. In a 6-year follow-up survey, Anisef and his colleagues questioned a 1973 Grade 12 cohort about reasons for withdrawing from post-secondary institutions. Fewer than 10% of those who withdrew did so for reasons of financial difficulty.[6] A study of student attrition from Scarborough College in 1978/79 revealed that an inability to afford the cost of an education was ranked among the least important of the reasons for leaving university.[7] The costs of higher education are apparently more of a deterrent earlier, before initial enrolment.

Survey questions used to gather data on student decisions are often imprecise, and as in the case of the environmental constraints discussed earlier, it is difficult to separate economic from non-economic factors. Even with subsidized tuition and student grants or loans, higher education involves some financial sacrifice for the average student. Individuals perceive the cost/benefit ratio of college or university in different ways, conditioned by

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[5] McRoberts, pp. 45-47.

[6] Anisef et al., Is the Die Cast?, p. 170.

[7] Sheldon B. Ungar, "The Retention Problem: An Analysis of Enrolment Attrition at a Canadian College", Canadian Journal of Higher Education, X(1980), 62.

their own backgrounds, aspirations and perception of the value of further education. Robert Pike discusses the problem of accurately assessing the influence of financial factors on enrolment decisions:

> ...if a student is not sure that he wants to attend university, then a prospective shortage of money may be the crucial factor in determining his decision not to attend. Alternatively, however, if he is highly motivated and anxious to undertake university studies, then he is likely to pursue his goals despite a prospective shortage of funds. In other words, whilst money may not always be an insuperable problem if taken in isolation, it may nevertheless be decisive for the student who is ambivalent about the idea of attending university anyway.[8]

Writing of the "minimal equality of access to university education" that exists in Ontario under the student loans programme, Hugh McRoberts also emphasizes the interaction of objective financial situation and subjective assessment of the value of education.[9] Like Pike and McRoberts, most critics will admit that a well-motivated student with the requisite high school preparation can attend university in Ontario, although he may have to live in a spartan manner or work part-time. Increasing accessibility beyond this minimum probably involves increasing opportunities for prospective students who are ambivalent, poorly motivated, inadequately prepared, or misinformed about the value of further education. How much can governments and institutions be expected to do to assist these people? Given the indisputable fact, however, that many middle class students with modest academic potential and rather low motivation benefit from publicly-financed institutions of higher education, is equity satisfied

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[8] Pike, Who Doesn't Get to University and Why, p. 106.

[9] McRoberts, p. 45.

if only the brightest, most determined working class students are able to attend? A number of issues are involved, and the available information does not provide satisfactory answers to questions that arise. Is subsidized tuition in public institutions an equitable method of income redistribution? Will increasing tuition invariably decrease accessibility? How effective is financial aid in increasing enrolment, particularly of low-income students? How can equal opportunity be assured for all levels of post-secondary institutions? Can residual environmental constraints be overcome by counselling, more information, and earlier assurances of financial aid?

Empirical studies of the impact of tuition changes and financial aid on enrolment can be used to support a variety of policy options. In a review of seven major studies of elasticity of enrolment in response to changes in cost, Jackson and Weathersby find that both low tuition and student grants stimulate increases in enrolment.[10] However, changes in aggregate enrolment are quite small in relation to the cost of lowered tuition or increased grants:

> For example, a one percentage point increase in the participation rate for each $100 of grant support means that the cost to the grantor (the public in most cases) is approximately $4,100 for each additional student enrolling in higher education. While no one individual receives a $4,100 grant, the fact that the vast majority of students who receive grants would probably enroll anyway means that dividing the total cost of all recipients by

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[10] Gregory Jackson and George B. Weathersby, "Individual Demand for Higher Education", Journal of Higher Education, XLVI(1975), 623-652.

the small number of additional students results in about $4,100 per additional student.[11]

Table 6 shows the increase in enrolment rates per $100 decrease in tuition, as calculated by several investigators. Most of the data used in these studies were collected in the 1960s or earlier, and thus do not reflect 1970s doubts about the economic value of the Bachelor's degree. It is possible that students today are influenced more by cost of attendance than students a generation ago.

Most demand studies do show that individuals from low-income families respond more to price changes in higher education than do students from middle- or high-income families.[12] Thus, the empirical evidence can be used to support two different policies: keeping tuition low or reducing it more, since any increase in costs will further reduce access for low-income groups who are already poorly represented in universities; or, raising tuition, since aggregate demand will not be greatly changed, and targeting financial aid to low-income students who are most deterred by cost. Evidence from studies of income redistribution through higher education is also used to support the tuition increase option, since public education is a subsidy that largely benefits the middle class.

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[11] Ibid., 649-650.

[12] Ibid., 625.

Table 6

Alternative Estimates of the Effect of a Change in Tuition on the Enrollment Rate, Various Years, 1919–72

Study	*Type*	*Year*	*Price response coefficient*[a]
Corazzini, Dugan, and Grabowski	National cross section[b]	1963	0.62
Hopkins	State cross section	1963	0.75
Barnes	Individual students	1970	1.53
Radner and Miller	Individual students	1966	0.05
Kohn, Manski, and Mundel	Individual students	1966	0.92
Hoenack	High school districts	1965	0.71
Hoenack and Weiler	Individual students	1972	1.46
Spies	Individual students	1971	0.05
Campbell and Siegel	Time series	1919–64	0.20
Bishop	Individual students	1963	0.90

Sources: Derived from the studies given in the first column, all of which are cited in the text (see index). Details of the calculations underlying the price response coefficients, shown in the last column, are available from the author. The calculations require correcting price response coefficients from various studies for price change since base year and for differences in enrollment base.

a. Increase in enrollment rate of eighteen- to twenty-four-year-olds (in percentage points) per $100 decrease in tuition, in 1974 dollars.

b. The data from the national sample were cross-sectionally stratified by the students' states of residence during high school, and average values were computed for each state's sample.

From: M. S. McPherson, "The Demand for Higher Education," in Public Policy and Private Higher Education (1978), p. 181, Table 3-9.

The low tuition advocates can point to studies like one recently done on the California state system which concludes that any appreciable increase in student charges would reduce enrolment in all public post-secondary segments and diminish educational opportunity for California as a whole.[13] In the same vein, Steve Hunka reviews the effect of tuition increases on people from different income levels, and concludes that "the only rationales which can support increased fees are public opinion and the government's political and social policies."[14]

Proponents of low tuition usually emphasize the societal benefits of higher education, as well as concern for low-income students who might be dissuaded from enrolling if tuition were raised. Although as Hunka says, public opinion (currently ambivalent towards higher education) and political policy (currently in favour of reducing costs) are the major rationales for increasing tuition, empirical studies of education economics and student behaviour can be marshalled in support of the position. For example, evidence from other jurisdictions can be used to show that reduced or free tuition does not automatically

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[13] The Price of Admission: An Assessment of the Impact of Student Charges on Enrollments and Revenues in California Public Higher Education (Sacramento: California State Postsecondary Education Commission, 1979). ERIC microfiche.

[14] Steve Hunka, Rationales for Determining Student Contributions to the Costs of Post-Secondary Education (Edmonton, 1979), p. 127. This is a dissenting opinion to the findings reached by a provincial task force reviewing student costs in Alberta.

increase enrolment of low-income students. Sweden has no fees for post-secondary education, but only 21% of students are from low-income families, compared to 55.5% in Canada.[15] However, the analogy does not take into account other differences in the two societies, such as the stronger apprenticeship system in Sweden that provides an alternative means of vocational training. The evidence shows that free tuition does not necessarily increase access; it does not prove that raising tuition will not decrease access.

A more sophisticated argument for raising tuition and advancing social equity is based on: (1) the current disproportionate representation of income groups in tax-supported post-secondary institutions, and (2) optimistic assumptions about the impact of financial aid on student enrolments. Since most university students are from middle- or high-income families, it can be argued that low tuition in publicly-supported institutions is a regressive form of income distribution.[16] Low-income tax payers, who

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[15] From an Ontario University Affairs Division report, Canadian/Swedish Post Secondary Attendance by Income Group (24 May 1979). A Canadian family income level of $14,000 or less in 1974 was equivalent to the Swedish low social group. Similarly, the social composition of students in Australian higher education has not altered significantly since the abolition of fees in 1974. D.S. Anderson, Students in Australian Higher Education: A Study of their Social Composition since the Abolition of Fees. (Kensington, N.S.W.: Tertiary Education Research Centre, University of New South Wales, 1980.)

[16] For example, O. Mehmet, Who Benefits from the Ontario University System: A Benefit-Cost Analysis by Income Groups, Ontario Economic Council Occasional Paper 7 (Toronto, 1978). This paper does not support higher tuition. It advocates more direct means of income redistribution, and recommends an advanced voucher system that will insure students of financial aid for higher education while they are still in the early years of high school.

constitute a large segment of the population, are less likely to benefit from low tuition than the more affluent, because fewer children from poor families take advantage of higher education (Table 7). This being the case, greater equity can be achieved if tuition is increased somewhat, and more direct subsidies given to low-income students. This approach is recommended by the Carnegie Commission on Higher Education in the United States, where the desire to preserve high tuition private institutions also enters into the debate about tuition in the public systems.[17] If the studies indicating low price responsiveness of the majority of students are correct, raising tuition will not significantly decrease enrolments, and more money will be available to help students who are most sensitive to price changes.

However, studies on the net benefits of higher education subsidies do not uniformly show the regressive income distribution that could be used to support increased tuition. Of nine studies reviewed by Susan Nelson, three found that tuition subsidies did improve income distribution, three found that they did not, and three were inconclusive. Nelson's paper has both good and bad news for low tuition advocates, and stresses the need for more information:

> On the good side, it has shown that existing evidence, poor though it tends to be, supports the position that tuition subsidies do seem to redistribute income from the upper to lower income classes. It goes on to emphasize, however, that the validity of this evidence must be questioned due to severe technical and conceptual problems. Furthermore, the redistributional impact of low tuition

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[17] Higher Education: Who Pays? Who Benefits? Who Should Pay? (1973) and Tuition: A Supplemental Statement (1974), Carnegie Commission on Higher Education.

Table 7

Benefit-cost ratios by income groups ($ million)

Income groups	Monetary benefits (1)	Net budgetary cost (2)	Benefit cost ratios Actual (3)	Benefit cost ratios Standardized (4)
Under $2,000	20.6	16.5	1.25	1.18
$ 2,000 - 4,000	39.6	51.0	.78	.74
$ 4,000 - 6,000	51.3	74.6	.69	.65
$ 6,000 - 10,000	254.0	289.4	.88	.83
$10,000 - 15,000	430.9	340.9	1.26	1.19
$15,000 and over	462.6	416.0	1.11	1.05
TOTAL	1,259.0	1,188.4	1.06	1.00

NOTE: Monetary benefits from Table 2; Net budgetary cost from Table 6b.

From: O. Mehmet, Who Benefits from the Ontario University System, p. 35, Table 7.

> (or other forms of subsidies) does not appear to be a very useful indicator of the equity of this method of finance. A preferred approach would evaluate the tax and benefit sides separately, judging the tax system on its progressivity (or lack thereof) and the benefit side on its success in providing equal educational opportunities.[18]

The bad news for low-tuition supporters is that public subsidies have not achieved equality of opportunity, although more has been accomplished in this direction than would have been achieved without subsidies. More information needs to be gathered on the practical effects of alternative methods of financing before an informed judgment can be made regarding the equity of current subsidies.[19]

The other side of the increased tuition policy involves insuring accessibility through aid targeted to low-income students. The present system of student aid in Ontario undoubtedly helps many students who would not otherwise be able to enrol. Data from the Anisef follow-up survey show that OSAP or the Canada Student Loan programme are major sources of support for low SES and rural students (Table 8). However, it is not certain that enrolment of low-income students can be substantially increased simply by providing more financial aid. Gregory Jackson used data from the U.S. National Longitudinal Study of the high school class of 1972 in order to assess the

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[18] Susan C. Nelson, "The Equity of Public Subsidies for Higher Education: Some Thoughts on the Literature", in Issues in Postsecondary Education Finance, ed. William D. Hyde, Jr., Education Commission of the States (Denver, 1978), ERIC microfiche, p. 23.

[19] Ibid., p. 24.

Table 8

FIRST MOST IMPORTANT SOURCES OF FINANCING COSTS OF POST-SECONDARY EDUCATION BY SELECTED SOCIAL BACKGROUND FACTORS

	Selected Social Background Factors									
	Sex		SES				Stratum			
Source of Financial Support	Men (%)	Women (%)	Low SES (%)	Medium Low SES (%)	Medium High SES (%)	High SES (%)	Big City (%)	Larger Cities (%)	Smaller Cities (%)	Towns and Rural Areas (%)
OSAP/CSL[a]	12.7	16.0	16.0	20.1	10.6	6.4	8.0	9.3	16.1	23.6
Summer employment earnings	41.2	28.6	27.7	31.5	41.5	37.7	40.8	35.4	34.2	28.3
Employment while attending school	10.9	7.0	9.7	9.6	9.7	6.4	8.1	10.7	8.4	8.4
Personal savings	9.2	8.8	7.7	11.5	9.7	8.6	7.0	10.6	9.2	9.2
Parental support	16.5	33.4	17.6	18.0	20.6	36.5	31.2	25.9	25.0	19.4
Other	9.5	6.2	11.2	9.3	7.9	4.4	5.0	8.1	7.0	11.0
TOTAL (N)	459	508	183	197	205	336	249	220	243	255
Significance (p)										

[a] - OSAP/CSL refers to Ontario Student Assistance Program, and to Canada Student Loans, respectively.

From: Is the Die Cast?, p. 156, Table 4-24.

dependence of high school graduates' decisions to attend college on financial aid awards. His conclusions regarding the effectiveness of financial aid as a persuader are somewhat pessimistic (although he is more concerned with increasing total enrolment than with improving accessibility):

> To efficiently increase enrollment, aid must be given to highly responsive subgroups who do not already enroll without aid, such as low-SES students. However, efficiency is not sufficient: an enrollment directed aid program must increase aggregate enrollment. The 92,952 students a low-SES aid program should attract represent only 3.1 percentage points on the enrollment rate. This is the dilemma in using aid to increase enrollment: efficient aid programs are too limited, unlimited ones are too inefficient.[20]

Other researchers in the U.S. conclude that increasing financial aid will not significantly increase attendance of low-income and minority students, since direct financial barriers are less important than class background and the kinds of academic credentials that students obtain in high school.[21] Once again, selection factors operate long before university entrance:

> The class factor in college access is the end-product of a host of deficits that, in fact, probably begin to accumulate before a child enters the first grade. We seriously doubt, therefore, that pouring substantially more money into Federal aid packages for higher education would make much difference in the long run.[22]

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[20] Gregory A. Jackson, "Financial Aid and Student Enrollment", Journal of Higher Education, 49(1978), 570.

[21] S.S. Peng, J.P. Bailey, and B.K. Eckland, "Access to Higher Education: Results from the National Longitudinal Study of the High School Class of 1972", Educational Researcher (Dec. 1977), 3-7.

[22] Ibid., p. 7.

These findings might not be directly applicable to Canada, where the post-secondary participation rate is lower than in the U.S., leaving a greater proportion of high school graduates who may still be denied further education simply because of financial need. However, the studies cited suggest that accessibility cannot be guaranteed by adjustments in tuition or financial aid policy. The rationales for one approach or the other become circular: raising tuition is justified because at present low-income tax payers support a system that mainly benefits middle-class students, who can afford to pay more and will attend anyway. Children from low-income families don't take advantage of higher education even with subsidized tuition. Improved financial aid should persuade more poor students to attend, but because the selection process begins long before high school graduation, the effectiveness of aid at the point of university entrance is in doubt. Similarly, retaining low tuition or eliminating it altogether may not significantly change the socio-economic mix of university students, since barriers to higher education are not all financial.

There is also uncertainty about the effect of different forms of financial aid. A COU study of the OSAP programme in the early seventies cautioned against greater emphasis on student loans:

> We are concerned that not enough is known about the reasons for an apparent upward shift in accessibility in the last five years in Ontario to permit us to dismiss a student aid program which incorporates grant money as being an irrelevant fact in this phenomenon. We are wary of substituting loans completely for grants, and have instead offered changes in OSAP that would

> permit grant monies to be concentrated at the level of admission, where we believe they will have the most effect.[23]

Porter, Porter and Blishen found that, contrary to the accepted view that low-SES students are reluctant to get into debt, a larger proportion of lower class students who aspired to a university education were prepared to borrow a significant amount of money for their education than were students from higher classes.[24] Comparisons with other jurisdictions also suggest that reliance on loans does not necessarily limit access. According to E.G. West, there are no significant differences in the enrolment rates in Ontario and Alberta, even though Alberta relies entirely on loans to cover tuition fees.[25]

Dependence on loans may not deter students from enrolling at the undergraduate level, but the prospect of borrowing even more to attend graduate or professional school may be one reason why fewer low-SES students participate in advanced university programmes (see Table 4). Table 9 shows that children of upper-income families tend to concentrate in professional fields such as

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[23] Accessibility and Student Aid, Report of the Subcommittee on Student Aid of the Council of Ontario Universities (Toronto, May 1971), pp. 112-113.

[24] Does Money Matter?, p. 162.

[25] E.G. West, Student Loans: A Reappraisal, Ontario Economic Council Working Paper No.4/75 (Toronto, 1975), p. 5.

Table 9

Distribution of 1974 Ontario graduates by father's income and field of study

Income groups / Field of study	Less than $2,000	$2,000 - 4,000	$4,000 - 6,000	$6,000 - 10,000	$10,000 - 15,000	$15,000 - 20,000	$20,000 - 25,000	$25,000 & over	Row Total
Education	0	0	136	453	591	289	128	242	1839
R	0.0	0.0	7.4	24.7	32.1	15.7	7.0	13.2	
C	0.0	0.0	18.8	12.8	9.9	11.6	7.4	10.8	10.50
Fine, applied, and perform. arts	0	0	0	132	127	34	0	77	370
R	0.0	0.0	0.0	35.7	34.3	9.2	0.0	20.8	
C	0.0	0.0	0.0	3.7	2.1	1.4	0.0	3.4	2.11
Humanities	0	0	40	412	675	61	42	505	1935
R	0.0	0.0	2.1	21.6	34.9	3.2	2.2	26.1	
C	0.0	0.0	5.3	17.3	11.3	2.4	2.4	22.5	11.05
Social sciences	118	174	161	862	1768	355	999	825	5862
R	2.0	3.0	2.7	14.7	30.2	16.3	17.0	14.1	
C	41.8	32.8	22.2	24.4	29.6	28.3	57.5	36.8	33.48
Agric. and bio. sciences	32	159	50	24	294	149	91	113	903
R	3.5	17.6	5.5	2.7	32.5	15.5	10.1	12.5	
C	11.3	29.9	6.9	0.7	4.9	5.6	5.2	5.0	5.16
Engin. and applied sciences	112	110	149	205	550	318	164	87	1895
R	5.9	5.8	7.9	10.8	29.0	16.8	19.2	4.6	
C	39.7	20.7	20.6	5.8	9.2	12.8	21.0	3.9	10.82
Health professions	0	48	0	127	249	61	31	170	791
R	0.0	6.1	0.0	16.1	37.2	7.7	11.5	21.5	
C	0.0	9.0	0.0	3.6	4.9	2.4	3.2	7.6	4.52
Mathematics and phys. sciences	20	40	139	204	572	36	20	85	1213
R	1.6	3.3	15.5	16.9	47.0	7.1	1.6	7.0	
C	7.1	7.5	26.1	5.8	9.6	1.5	1.2	3.8	6.95
Other specialities (Gen. arts and sciences)	0	0	0	916	1094	548	0	139	2697
R	0.0	0.0	0.0	34.0	40.6	20.3	0.0	5.2	
C	0.0	0.0	0.0	25.9	18.3	22.0	0.0	6.2	15.40
Row Total	282	531	725	3537	5965	2492	1735	2243	17510
%	1.61	3.03	4.14	20.20	34.07	14.23	9.91	12.81	100.0

NOTE: R is row percentage; C is column percentage

SOURCES: Statcan 1975 Post Secondary Students Survey; Statcan 1974 Graduates Data (Preliminary)

(Full-time male undergraduates only)

From: Who Benefits from the Ontario University System, pp. 117-18, Table 1.

medicine, dentistry and law, which usually ensure high incomes and stability of employment. We need to know more about the reasons behind the apparent streaming by socio-economic status in various post-secondary programmes. Are differential fees the most important determinant, or do they merely reinforce certain background factors that direct students toward particular programmes? For example, poor children may never aspire to advanced university degrees because of the absence of professionally-educated role models in their immediate environment. On the other hand, since selection to professional programmes is highly dependent on academic success in undergraduate courses, socio-economic streaming may be a residual effect of poor preparation in primary and secondary school. Changes in financial aid or tuition policy may only partially overcome these distinctions. However, equality of access will not be achieved if students from low-income families are enrolled only in community colleges or general undergraduate programmes.

Non-financial barriers to accessibility have not received as much attention. For example, geographic proximity to universities, and the different background experiences of rural and urban youth influence rates of university attendance. In Anisef's Grade 12 cohort, 74% of Toronto young people received post-secondary education, compared to only 53% of small town and rural-area youth.[26] In comparison to their urban counterparts, fewer high socio-economic status respondents from small towns or rural areas went to universities, and more went to CAAT's or directly to work. Regional origins appear to have an impact on educational and career plans, apart from simple availability of money to cover direct costs. Further study of regional rates of

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[26] Is the Die Cast?, pp. 109-113.

attendance would help to identify reasons for these differences, and ways of widening opportunities for capable students from all areas of the province.

It would also be useful to know more about possible information barriers that limit access. The Anisef survey indicated a need for more counselling at all levels, to insure that students are informed about course selection, standards required, and possibilities of financial aid. Guidance at an early age is particularly crucial for students from families without previous university contact. Although by Grade 12 most interested high school students are aware of university requirements and sources of financial aid,[27] the critical choice of high school programme is made earlier. Students who haven't chosen a full range of academic courses in high school limit their choices in university. The system of optional credits, rather than set programmes in high school may be a disadvantage to the student from an educationally unsophisticated family, unless teachers and guidance counsellors advise in course selection.

Recent concern about unemployment among university graduates probably has some influence on decisions for further education. Does the apparent reduced economic value of the undergraduate degree affect some students more than others? Students from middle- or high-income families may alter plans for university majors, choosing commerce rather than history; or law rather than graduate work in the humanities. The low-income student, on the other hand, may decide in

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[27]Porter, Porter and Blishen, Chapters III and V.

favour of an immediate job, or choose a community college vocational course rather than university. A comparison of post-secondary students by parent's educational attainment shows that enrolments were not significantly more representative in 1974 than in 1968 (Table 10).[28] Were higher costs and declining job opportunities for university-trained manpower responsible for this? Would participation of low-income students have declined even more without federal and provincial aid schemes?

Existing information on accessibility in Ontario does not satisfactorily answer a number of questions raised in this paper, although the Anisef study data provide recent evidence of inequality of outcomes in the Ontario post-secondary system. No doubt another survey of this kind would also show that in terms of socio-economic and regional backgrounds, university students are not representative of the larger Ontario population. Ideally, a new study of accessibility would be analytical as well as descriptive, identifying as specifically as possible the reasons for existing inequalities. It would be useful to differentiate between barriers acting at the point of university entrance and circumstances that restrict educational possibilities at earlier stages. Since economic and non-economic factors are closely interrelated, clear-cut solutions to the larger problem of accessibility will be difficult to achieve. It may be more profitable

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[28] Max von Zur-Muehlen, The Educational Background of Parents of Post-Secondary Students in Canada, 2nd Draft (Ottawa, 1978), p. 56.

Table 10

Educational Attainment of Fathers of Male and Female Full-time Undergraduate Students, 1968-69 and 1974-75

Fathers' Educational Attainment	Post-secondary Student Survey, 1968-69			Post-Secondary Student Survey, 1974-75		
	Male	Female	Total	Male	Female	Total
Elementary	21.8	15.3	19.4	19.8	17.0	18.5
Some High School	23.5	24.6	23.9	24.3	24.5	24.4
Completed High School	14.3	13.1	13.9	15.3	14.9	15.1
Sub-total High School	37.8	37.8	37.8	39.5	39.3	39.4
Total Elementary and Secondary	59.6	53.0	57.2	59.3	56.3	57.9
Some University	7.0	8.0	7.4	8.9	9.4	9.1
University Degree(s)	16.4	19.5	17.5	21.7	23.3	22.5
Sub-total University	23.4	27.5	24.9	30.7	32.8	31.6
Other Education or Training	17.0	19.4	17.9	10.0	10.9	10.4
Grand Total	100.0	100.0	100.0	100.0	100.0	100.0
Number Reported	133,259	74,967	208,226	89,606	75,723	165,329

From: The Educational Background of Parents of Post-Secondary Students in Canada, p. 33.

to concentrate on areas directly related to institutional or ministry policies, such as:

(1) The impact of changes in tuition on students from different socio-economic and regional backgrounds, including effect on decision to pursue further education, on choice of institution, programme, and level of degree.

(2) The possible effect of different forms of financial aid on student decisions.

(3) The extent of and reasons (financial or otherwise) for an apparent streaming of students from higher socio-economic backgrounds into university graduate and professional programmes.

(4) Determining to what extent the regional disparities in university attendance reported by Anisef can be remedied, given the existing geographical distribution of the universities.

(5) Discovering whether information barriers, such as insufficient guidance in high school, ignorance of financial aid, or lack of information about the costs and benefits of university education contribute to inequality.

Whatever the specific areas under investigation, a good deal of attention should be focussed on the methodology to be employed in a study of accessibility, since subjective responses to survey questions about family finances, the affordability of university education, and plans for meeting costs are not always reliable. Each person weighs the costs and benefits individually. There will always be equally qualified students with similar financial resources who make different decisions. An increase in tuition fees or the availability of financial aid may not be the most important determinant for the majority of students, but for some it will be critical. An effective accessibility study should indicate how many students would change their educational plans in direct response to specific tuition or financial aid policies, the nature of these changes, and also the role of non-financial factors in determining student choice.